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PATENT

Docket No: 952.701

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jar-Chen Wang
Application No: 09/833,370
Filed: April 12, 2001
For: Rider Propelled Vehicle
Art Unit: 3619

Box Application
Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Commissioner:

Please amend the application filed April 12, 2001, as follows:

In the Summary Of The Invention:

Please amend the paragraph starting on line 19 of page 5 of the application.

A two-wheel propulsion means is provided. The two-wheel propulsion means possesses a propulsion wheel disposed at each of the two corners and a safety wheel assembly disposed at the third corner of the tricycle wheel arrangement. The two propulsion wheels and the safety wheel assembly are attached to the vertical steering shaft by a horizontal support. Each propulsion wheel is parallel to the other propulsion wheel. Each propulsion wheel rotates about a horizontally disposed axle. The horizontally disposed axle is connected to the horizontal support. The safety wheel assembly is sized, shaped and disposed so that it only comes into contact with the ground when the two-wheel propulsion means excessively tips over on both the propulsion wheels. The two-wheel propulsion means and vertical steering shaft combination supports the first end of the frame. The pair of propulsion wheels is spaced at equal distances on opposite sides of vertical steering shaft. The propulsion wheels rotate in only one direction about its horizontal axle. Both propulsion wheels rotate in the same direction about their respective horizontal axle.

Please amend the paragraph starting on line 14 of page 6 of the application.

The two-wheel propulsion means is adapted to occupy a first neutral position in which the vertical plane of each propulsion wheel is generally parallel to the centerline plane of the frame. The first neutral position permits forward propulsion of the vehicle in a direction parallel to the centerline plane of the frame.

Please amend the paragraph starting on line 18 of page 6 of the application.

The rider operable steering means is employed by the rider to rotate the two-wheel propulsion means. When the two-wheel propulsion means is rotated, a reversing force is exerted upon one of the propulsion wheels resulting in the two-wheel propulsion means pivoting about the point of contact of the propulsion wheel with the ground. The pivoting of the two-wheel propulsion means induces a forward motivating force to be applied to the other propulsion wheel. The motivated propulsion wheel rotates forward until the rider reverses the rotation of the two-wheel propulsion means about the vertical steering shaft centerline axis or the vertical plane of the propulsion wheel is perpendicular to the centerline plane of the frame. A reverse direction rotation about the vertical steering shaft reverses the direction of the force applied to each propulsion wheel but still results in forward propulsion of the vehicle. The back and forth rotation about the centerline axis of the vertical steering shaft propels the vehicle forward. The safety wheel assembly imparts no propulsion force into the vehicle during the back and forth rotation about the vertical centerline axis of the vertical steering shaft that propels the vehicle forward. This back and forth manipulation of the steering mechanism results in "walking" propulsion of the vehicle.

Please amend the paragraph starting on line 11 of page 7 of the application.

The two-wheel propulsion means is tailored to occupy a second neutral position 180 degrees opposite the first neutral position. When in the second neutral position, the vertical plane of each propulsion wheel is generally parallel to the centerline plane of the frame. The second neutral position permits backward propulsion of the vehicle in a direction parallel to the centerline plane of the frame. The back and forth rotation of the two-wheel propulsion means about the vertical steering shaft of up to plus or minus 90 degrees from the second neutral position imparts a generally backward propulsion of the vehicle through a process that is the reverse of the forward propulsion process.

Please amend the paragraph starting on line 19 of page 7 of the application.

In a second version of the invention, a wheel, in contact with the ground only when the two-wheel propulsion means excessively tips over on both the propulsion wheels, is rotationally connected to the safety wheel assembly. The safety wheel assembly possesses a means for permitting rotation of the wheel about a vertical axis. The safety wheel assembly possesses a means for permitting rotation of the wheel about a horizontal axle.

Please amend the paragraph starting on line 3 of page 8 of the application.

In a third version of the invention, a removable upper vertical steering shaft support is provided. The removable upper vertical steering shaft support is able to detachably connect to the upper surface of the frame and rotationally attached to the vertical steering shaft.

Please amend the paragraph starting on line 19 of page 8 of the application.

In a fifth version of the invention, the vertical steering shaft possesses a vertical telescoping extension capability that changes the distance between the first end and the second end of the vertical steering shaft. The vertical steering shaft is composed an outside shaft with a first end, a second end, an outer surface, a hollow interior and a plurality of concentrically ensleeved inside shafts, each capable of being ensleeved by its corresponding outside shaft to make the vertical steering shaft telescopic. A locking means is affixed to the second end of each outside shaft and provides a means for locking the outside shaft to each corresponding ensleeved inside shaft. Each inside shaft is capable of being locked into a user determined telescopic extension length.

In the Description Of The Drawings:

Please amend the paragraph starting on line 21 of page 10 of the application.

Figure 2 is a side view of the forward end of the vehicle canted around a horizontal forward to aft axis to show the connection of the two-wheel propulsion means to the vertical steering shaft;

Please amend the paragraph starting on line 41 of page 12 of the application.

Figure 19 is a side view canted around a horizontal forward to aft axis, to show the snow ski board configuration, the removable seat extension with its first end installed in the receiver means and rubber tipped ski poles;

Please add the following two paragraphs after the paragraph for Figure 19:

Figure 20 is a side view showing the removable upper vertical steering shaft support installed:

Figure 21 is a side view showing the removable aft vertical steering shaft support and the removable forward vertical steering shaft support installed.

In the Detailed Description Of The Invention:

Please amend the paragraph starting on line 4 of page 14 of the application.

A two-wheel propulsion means 58 is provided. The two-wheel propulsion means 58 possesses a propulsion wheel 62 disposed at each of the two corners and a safety wheel assembly 66 disposed at the third corner of the tricycle wheel arrangement. The two propulsion wheels 62 and the safety wheel assembly 66 are attached to the vertical steering shaft 46 by a horizontal support 70. Each propulsion wheel 62 is parallel to the other propulsion wheel 62. Each propulsion wheel 62 rotates about a horizontally disposed axle 74. The horizontally disposed axle 74 is connected to the horizontal support 70. The safety wheel assembly 66 is sized, shaped and disposed so that it only comes into contact with the ground when the two-wheel propulsion means 58 excessively tips over on both the propulsion wheels 62. The two-wheel propulsion means 58 and vertical steering shaft 46 combination supports the first end of the frame 14. The pair of propulsion wheels 62 is spaced at equal distances on opposite sides of vertical steering shaft 46. The propulsion wheels 62 rotate in only one direction about its horizontal axle 74. Both propulsion wheels 62 rotate in the same direction about their respective horizontal axle 74.

Please amend the paragraph starting on line 1 of page 15 of the application.

The two-wheel propulsion means 58 is adapted to occupy a first neutral position in which the vertical plane of each propulsion wheel 62 is generally parallel to the centerline plane of the frame 14. The first neutral position permits forward propulsion of the vehicle in a direction parallel to the centerline plane of the frame 14.

Please amend the paragraph starting on line 5 of page 15 of the application.

The rider operable steering means 78 is employed by the rider to rotate the two-wheel propulsion means 58. When the two-wheel propulsion means 58 is rotated, a reversing force is exerted upon one of the propulsion wheels 62 resulting in the two-wheel propulsion means 58 pivoting about the point of contact of the propulsion wheel 62 with the ground. The pivoting of the two-wheel propulsion means 58 induces a forward motivating force to be applied to the other propulsion wheel 62. The motivated propulsion wheel 62 rotates forward until the rider reverses the rotation of the two-wheel propulsion means 58 about the vertical steering shaft 46 centerline axis or the vertical plane of the propulsion wheel 62 is perpendicular to the centerline plane of the frame 14. A reverse direction rotation about the vertical steering shaft 46 reverses the direction of the force applied to each propulsion wheel 62 but still results in forward propulsion of the vehicle. The back and forth rotation about the centerline axis of the vertical steering shaft 46 propels the vehicle forward. The safety wheel assembly 66 imparts no propulsion force into the vehicle during the back and forth rotation about the vertical centerline axis of the vertical steering shaft 46 that propels the vehicle forward. This back and forth manipulation of the steering mechanism results in "walking" propulsion of the vehicle.

Please amend the paragraph starting on line 21 of page 15 of the application.

The two-wheel propulsion means 58 is tailored to occupy second neutral position 180 degrees opposite the first neutral position. When in the second neutral position, the vertical plane of each propulsion wheel 62 is generally parallel to the centerline plane of the frame 14. The second neutral position permits backward propulsion of the vehicle in a direction parallel to the centerline plane of the frame 14. The back and forth rotation of the two-wheel propulsion 58

means about the vertical steering shaft 46 of up to plus or minus 90 degrees from the second neutral position imparts a generally backward propulsion of the vehicle through a process that is the reverse of the forward propulsion process.

Please amend the paragraph starting on line 7 of page 16 of the application.

In a second version of the invention, a wheel 82, in contact with the ground only when the two-wheel propulsion means 58 excessively tips over on both the propulsion wheels 62, is rotationally connected to the safety wheel assembly. The safety wheel assembly 66 possesses a means for permitting rotation of the wheel 82 about a vertical axis. The safety wheel assembly 66 possesses a means for permitting rotation of the wheel 82 about a horizontal axle.

Please amend the paragraph starting on line 13 of page 16 of the application.

As illustrated in figures 1, 2, 3, 11, 12 and 21, a removable forward vertical steering shaft support 86 is provided. The removable forward vertical steering shaft support 86 is able to detachably connect to the upper surface 26 of the first end of the frame 18 and rotationally attached to the vertical steering shaft 46. The removable forward vertical steering shaft support has a first end 90 and a second end 94.

Please add the two following paragraphs starting after line 33 of page 16 of the application.

As illustrated in figure 21, a removable aft vertical steering shaft support 86 is provided. The removable aft vertical steering shaft support 103 is able to detachably connect to the upper surface of the midsection of the frame 26 and rotationally attached to the vertical steering shaft 46. The removable aft vertical steering shaft support has a first end 93 and a second end 97.

As illustrated in figure 20, a removable upper vertical steering shaft support 101 is provided. The removable upper vertical steering shaft support 101 is able to detachably connect to the upper surface of the midsection of the frame 26, rotationally attached to the vertical steering shaft 46 and detachably connected to the upper surface of the first end of the frame 18. The removable upper vertical steering shaft support has a first end 91, a second end 96 and a midsection 95.

Please amend the paragraph starting on line 39 of page 16 of the application.

As illustrated in figure 7 and 10, the vertical steering shaft 46 possesses a vertical telescoping extension capability that changes the distance between the first end 50 and the second end 54 of the vertical steering shaft 46. The vertical steering shaft 46 is composed of an outside shaft 98 with a first end, a second end 100, an outer surface, a hollow interior and a plurality of concentrically ensleeved inside shafts 102, each capable of being ensleeved by its corresponding outside shaft 98 to make the vertical steering shaft 46 telescopic. A locking means 106 is affixed to the second end 100 of each outside shaft 98 and provides a means for locking